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A multivariate analysis of psychosocial risk factors in pediatric transplant patients

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BACKGROUND

- The Pediatric Transplant Rating Instrument (P-TRI) is a validated 17-item rating scale that assesses overall risk, illness-related factors, treatment adherence, psychiatric history, substance use history, family environment, and logistical barriers that may impact transplant success
- Treatment non-adherence is one of the leading causes of graft rejection and re-transplantation

Objective:
Understand how medical diagnostic, treatment factors, and patient psychosocial factors impact risk and treatment adherence during pre-transplant evaluation

METHODS

- Retrospective chart review of 177 pediatric transplant candidates between 2013-2021
- Diagnostic categories: CAKUT, Primary renal, Syndromic neurogenic bladder
- Study analyzed pretransplant PTRI scores, demographic data, dialysis and catheterization status at time of evaluation

RESULTS

- Moderate evidence that patients who catheterized had lower adherence scores on the PTRI compared to those who did not (OR 0.46, $p=0.021$)
- Primary renal patients were more likely to be at risk for psychiatric concerns compared to CAKUT patients (OR 1.96; CI=1.06-3.66; $p=0.046$)
- See Data Images & Analysis section for further results

CONCLUSIONS

- Treatment adherence has significant impacts on graft outcomes and early interventions for psychosocial risk factors is essential
- Catheterization status, dialysis status, age, and initial diagnosis may affect adherence
- Primary renal patients were found to have more psychiatric risk factors compared to CAKUT patients and may benefit from additional mental health support
- Hispanic non-English speaking patients and patients with public insurance may be more at risk of not having sufficient knowledge about transplant. Additional guides and resources should be used to assure understanding

Main Points & Key Takeaway

- Patients who self-catheterize have more adherence risk factors
- Patients not on dialysis and older patients have more adherence risk factors
- Primary renal patients have more psychiatric risk factors compared to CAKUT patients
- Hispanic non-English speaking patients and patients with public insurance are more at risk of not having sufficient knowledge about transplant



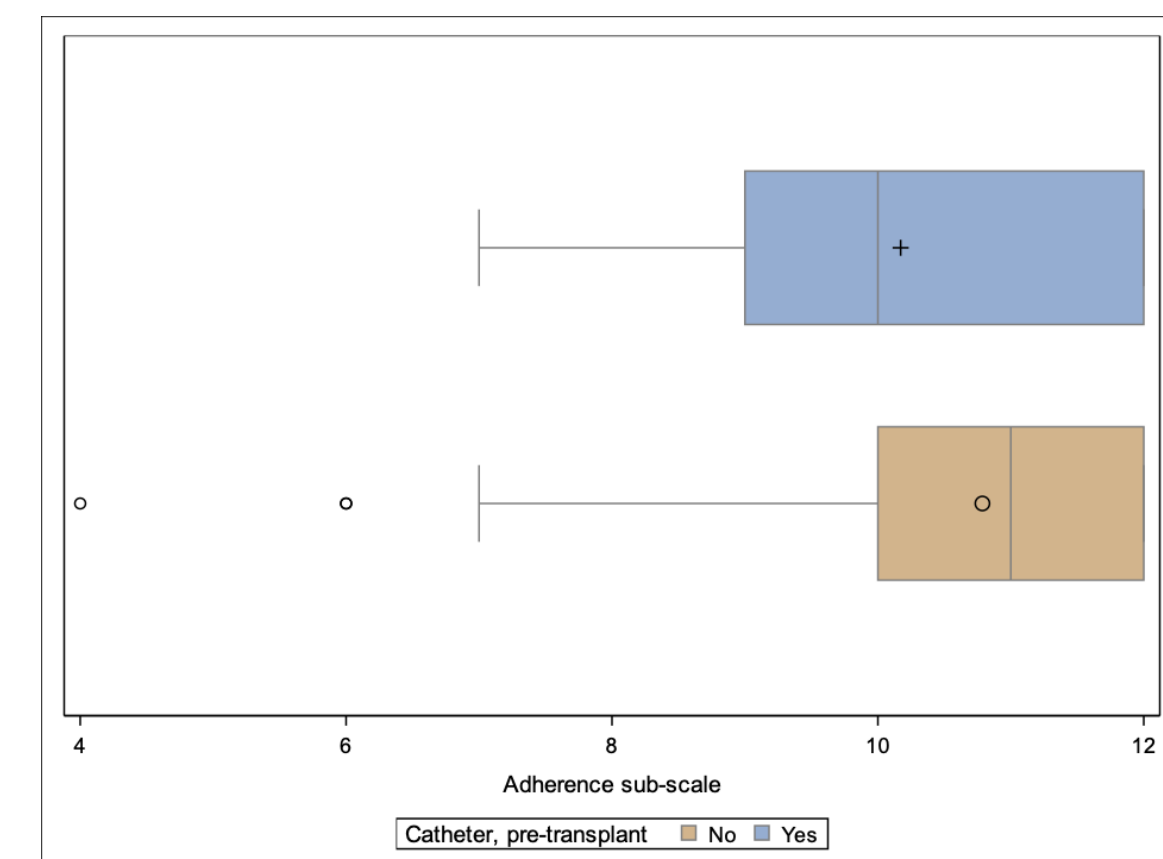
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DATA IMAGES & ANALYSIS

Adherence subscale by catheterization status



Adherence of patients on dialysis and each year of life

Comparison	Adherence scores	P-value
Pts on dialysis vs not on dialysis	↑	0.067
Of the patients on dialysis: CAKUT pts vs primary renal pts	↑	0.082
Each additional year of life	↓	0.001

Knowledge about transplant Multivariate analysis

Comparison	Risk	OR	P-value
Hispanic non-English speaking vs non-Hispanic English speaking	↑	3.4	0.067
Public vs private insurance	↑	3.8	0.082

- No financial disclosures